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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/700,454

11/05/2003

Kazuaki Oishi

108066-00102

6380

7590

05/26/2004

ARENT FOX KINTNER PLOTKIN & KAHN, PLLC
SUITE 400
1050 CONNECTICUT AVENUE, N.W.
WASHINGTON, DC 20036-5339

EXAMINER

NGUYEN, VINCENT Q

ART UNIT

PAPER NUMBER

2858

DATE MAILED: 05/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/700,454

Applicant(s)

OISHI ET AL.

Examiner

Vincent Q Nguyen

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/5/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because it contains legal phraseology "comprises" (e.g. line 1). Correction is required. See MPEP § 608.01(b).

Drawings

3. Figures 11 and 12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed

drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Objection

4. Regarding claim 1, the claim recites the limitation "counts" in line 7. There is insufficient antecedent basis for this limitation in the claim. Does Applicant mean counter? For the purpose of examination, the examiner assumes that the claim intended to recite "by assigning a lighter weight to the counter".

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claims 1-7, it is not understood what is meant by "assigning a lighter weight to the counts at a starting time and ending time of the counting period"?

Regarding figure 7, the illustration of "Weighting values of weight assigning wave number measurement circuit (Count up values for one reference clock)) is not

understood. What is the relationship of number "1" and "2"? What are number "1" and number "2" represented?

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-7, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hulsing (5,095,264).

Regarding claims 1-7, Hulsing discloses a frequency measurement circuit for measuring frequency comprising (Figures 3, 5) a frequency measurement unit (52) for counting a reference clock during a counting period having a predetermined number of waves of the input signal, wherein the frequency measurement unit (52) counts the reference clock, compared with the other times.

The only difference between Hulsing and the invention claimed is that the claim recites counts the reference clock by assigning a lighter weight to the counter at a starting time and ending time of the counting period in place of sample time (Figure 5).

Although, Hulsing does not explicitly disclose, it would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that the sample time would assign value to the counter (Column 4, lines 3-9) to minimize the

effect of a duty cycle to enhance the accuracy of the frequency measuring (Column 4, lines 50-57).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Patent No. 5,442,278 (Fan Chiang et al.) discloses an apparatus for detecting frequency of an input signal by counting the pulses of a reference signal of a predetermined frequency within one cycle of the input signal is disclosed. In response to the reference signal, a comparator is used to compare the output value of the first and the second latch. When they are different, a flip-flop generates an interrupt signal to a microprocessor.

Patent No. 4,882,740 discloses a device counting a first and second number of the zero-cross pulses during and after the predetermined time, producing a number difference between the first number and the second number by subtracting the first number from the second number and halving the number difference. When the predetermined time is set long, the average frequency of the signal is counted, and when that is set short comparing with the partly varied interval of the signal frequency.

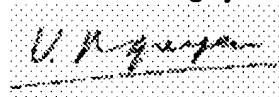
Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent Q Nguyen whose telephone number is (571) 272-2234. The examiner can normally be reached on Mon-Fri 8:30am-5:00pm.

Art Unit: 2858

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (571) 272-2233. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306.

Vincent Q. Nguyen

A handwritten signature in cursive script, appearing to read "V. Nguyen", is written over a rectangular area with a light gray dot grid pattern.

May 21, 2004